

# **ASSESSING THE ROLE AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**



**ADDIS ABABA SCIENCE & TECHNOLOGY  
UNIVERSITY**

**School of Civil Engineering**

**Department of Construction Technology & Management**

**By**

**Danayt Tadesse**

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## **Table of Contents**

Declaration .....	iv
Acknowledgement.....	v
Dedication.....	vi
Abstract.....	vii
List of Table & Graphs .....	iii
List of Figure.....	iii

## **CHAPTER ONE**

1. INTRODUCTION .....	1
1.1. Background .....	1
1.2. Statement of The Problem.....	2
1.3 Objective of The Study .....	5
1.4 Scope of the study .....	5

## **CHAPTER TWO**

2. Literature Review .....	6
2.1. Definition of project .....	6
2.2 Definition of Project Management.....	7
2.3 Construction Project Management .....	9
2.4 Project Stakeholders .....	10
2.5 Definition of Project Manager .....	11
2.6 Role of Project Manager .....	11
2.6.1 Role of Project Manager in Classic Project Management.....	12
2.6.2 Emerging Views in the Role of Project Managers.....	12
2.7 Responsibility of Project Manager .....	14
2.8 Authority Project Manager .....	15

2.9 Overview Project Manager Skills .....	16
2.9.1 Technical or Hard Skill .....	16
2.9.2 Soft or Interpersonal Skill.....	18
2.9.3 Conceptual and Organizational skill.....	24

## **CHAPTER THREE**

3. Project Methodology .....	25
------------------------------	----

## **CHAPTER FOUR**

4. Project Analysis and Discussion .....	27
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## **CHAPTER FOUR**

5. Conclusion and Recommendation .....	35
5.1. Conclusion .....	35
5.2. Recommendation .....	36
6. Reference .....	37
7. Appendix .....	43

## **List of Tables**

Table 1: Summary of interviews.....	30
Table 2: Summary of questioners.....	33

## **List of Figures**

Figure1: Soft or Interpersonal skills.....	19
--	----

## **List of Graphs**

Graph 1. Technical or Hard skill vs. Capability.....	31
Graph 2. Technical or Hard skill vs. Capability.....	32
Graph 3. Interpersonal or Soft Skill vs. Capability.....	34
Graph 4. Interpersonal or Soft Skill vs. Capability.....	34

## **DECLARATION**

I declare that this project entitled “Assessing the Role and Skills of Project Managers in Federal Road Projects” is my original work. This project has not been presented for any other university and is not concurrently submitted in candidature of any other degree, and that all sources of material used for the thesis have been duly acknowledged.

Candidate:

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

## **ACKNOWLEDGEMENT**

First and foremost, I would like to thank God for enabling me to complete this project. My special thanks to my supervisor, Dr- Ing Wubshet Jekale for his valuable comment and assistance through this project. I also thank my husband for his understanding, assistance, support and endurance till I complete this project. I thank all my families specially my mom, friends. I would also like to thank all key informants who took part in the interview to share their experiences.

## **Dedication**

To

My Mother Azmera Hailu for her ongoing love and support

And

My Father Tadesse Hailesellase who could not see this completed.

## **ABSTRACT**

The project manager's responsibilities are to plan and control company resources efficiently and to complete the project on schedule, within the budgeted costs and specified quality towards making the project a success. However, many reports have shown the opposite results. Studies on this issue are pointing towards the poor understanding of good practice as a basic problem for the failures in project management. The objective of this paper is to assess the current role, responsibility, authority and skills applied by project managers and to identify the current practise of project managers in federal road projects. The methods utilized to collect and analyse the data's were by distributing questioners, reviewing different literatures and interviewing road project managers, senior executives and company owners of the relevant projects. The collected data shows that a good project manager must have both technical and soft skill and also Training and certification must be given for project managers in order to enhance their managerial role in projects.



## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1. Background**

Interest in project management is growing significantly. It is important to take note that upgrading and enhancing the management capability is vital for growth and expansion in the construction industry (Thomas and Mengel.2008).

The construction industry is evolving around project management training and education. The most common constraints in the construction industry within developing countries are the oversupply of unskilled labor and a restricted supply of management manpower. (Abu Bakar, 2002)

Effective project management techniques are important to ensure successful project performance. A poor strategy as well as incorrect budget or schedule forecasting can easily turn an expected profit into loss. This is especially true for the construction industry where projects have a relatively short life cycle and the project activities are non-repetitive with rather complex interrelationships, so that there is little opportunity to improve on a wrongly chosen or adopted strategy.

The appointment of the best project team will better ensure the success of the project, but the best project team must be led by a good leader, which is undoubtedly the project manager. Edum-Fotwe and McCaffer, affirmed that project managers in construction play a crucial role. This is as project managers are responsible for the overall success of delivering the owner's physical development within the constraints of cost, schedule, quality and meeting the requisite safety requirements.

## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

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Often, a construction project has limited resources (Gabriel *et al.* 2006). Therefore, it is very important to find the right project managers for such projects. Different projects require different skills and capabilities of the project manager.

Many project managers working in an industry were promoted to a managerial position due to their initial technical expertise, thus receiving the title of project manager (Burke, 2001:6). These project managers have industry-specific knowledge. The level of competency is a debate that is currently taking place in the construction industry.

The role and authority of the project managers must be clearly defined and supported. Project managers are not simply people selected from among the project teams; they need to have project management skills. Learning project management skills can help you complete projects on time, on budget, and on target. The discipline of project management includes proven strategies for clarifying project objectives, avoiding serious errors of omission, and eliminating costly mistakes. It also addresses the necessary people skills for getting the cooperation, support, and resources to get the job done. (Larry Richman, 2002)

Knowing what project managers do, what kind of skills they demonstrate and what is their role, would seem to create a very important step for the selection and development of an effective manager who is equipped to cope with any problem and accomplish unique outcomes with limited resources within critical time constraints. Considering the effect of project manager in construction industry, it becomes interesting to identify the importance roles, responsibilities, authority and skills of a project manager.

This project attempts to identify what roles , responsibility, authority and skill are needed in assigning a project manager and it also tries to study the skills and the roles of the 'ideal project manager' as perceived in Federal road projects.

## **1.2. STATEMENT OF THE PROBLEM**

Many projects in developing countries encounter considerable time and cost overruns, fail to realize their intended benefit or even totally terminated and abandoned before or after their completion (Idoko, 2008) “ Moreover, the development of the construction industry in developing countries generally lags far behind from other industries in those countries and their counter parts in developed nations”. Generally, as (Ofori, 2006) & (Jekale, 2004) concluded, “The construction industry in developing countries failed to meet expectations of governments, clients and society as a whole”.

The main reason for project failure (in developed countries) is not the absence of general resources or financial resources, but the lack of Project management capability (Malan et al, 2007). Further, in the developed countries external conditions such as market & politics are less important for the success of projects (Torp, Austeng, & Jekale).

Previous, research works by [(Adams, 1997), (Long, 2004) and others] have indicated poor managerial capability of contractors to be one of the critical problems of the construction industry in developing countries. Thus, improving the managerial capability of contractors need be one of the priority considerations for improvement of capability of contractors in developing countries. (Abadir H.Yimam, 2011)

Lack of institutional capacity and trained personnel is also another main reason why projects fail in developing countries (Voropajev, 1998). Further, the lack of awareness about the benefit and application of Project Management in many developing countries” organizations combined with the presence of few trained project managers and wrong perception that sees project managers as an unnecessary expense has contributed to the low level of development of project management in those countries. (Andersen, 2008), (Idoko, 2008).

## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

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Others have also strongly emphasized that many project managers working in a construction industry were promoted to a managerial position due to their initial technical expertise, thus receiving the title of project manager (Burke, 2001: 4). To be effective as a project manager, an individual must have management as well as technical skills (Kerzener, 2009).

Therefore we need to understand the role and skills needed for project managers which may have a great impact on delivering the project on time, within allocated budget and meet the expectation of the stakeholders.

### **1.3. OBJECTIVE OF THE STUDY**

The main objectives of this project were to:

1. Assess the current roles, responsibility and authority of project managers.
2. Identify gaps in project manager's role, responsibility, authority and skill to improve project performance.

The following main questions are formulated and were answered:

1. What are the roles, duties, authority and responsibility of a project manager?
2. What are the skills required for a project manager to accomplish his role and responsibility?

### **1.4. SCOPE OF THE STUDY**

The scope of the study is limited to assessment of role, responsibility and skills of project managers and their practices in Federal road projects. Thus, specific tools and techniques of project managers' skill are not dealt in detail since the emphasis of this project is to show the importance of knowing what skills, role and responsibly should have a project manager to achieve project objectives.

## **CHAPTER TWO**

### **2. LITERATURE REVIEW**

#### **2.1 Definition of project**

A project is a temporary endeavour undertaken to create a unique product, service, or result. The temporary nature of projects indicates that a project has a definite beginning and end. The end is reached when the project's objectives have been achieved or when the project is terminated because its objectives will not or cannot be met or when the need for the project no longer exists. (PMI, 2013).

A project has a defined scope, is constrained by limited resource, involves many people with different skill and, usually progressively elaborated throughout its life cycle. [(Stanleigh, 2007), (Cleland & Ireland, 2002), (Wheatley)]

Projects are essential to the growth and survival of organizations. Projects create value in the form of improved business processes, are indispensable in the development of new products and services, and make it easier for companies to respond to changes in the environment, competition, and the marketplace.

### **2.2 Definition of Project Management**

Project management has been around since the beginning of time. Noah was a project manager. It took careful planning and execution to construct the ark and gather two of every animal on earth, including all the necessary food and water.

Throughout history many famous projects were completed, such as the Egyptian pyramids and the Great Wall of China (Burke, 2001:11; Shenhar, 2008: 2). Project management as a discipline had undergone major changes during World War One and in the course of time evolved into modern day project management. It was supported by the aerospace, defence and construction industries (Kerzner, 2006: 35-40). In due course, project management matured and became a professional discipline with its own body of knowledge regulated by the Project Management Institute.

Today, modern project management has emerged as a premier solution in business operations. Large and small organizations recognize that a structured approach to planning and controlling projects is a necessary core competency for success.

Many and different definitions were given for project management. Summarizing those definitions this project defines Project management as: The application and integration of modern management and project management knowledge, skills, tools and techniques to the overall planning, directing, coordinating ,monitoring and control of all dimensions of a project from its inception to completion ,and the motivation of all those involved to produce the product ,service or result of the project on time, within authorized cost, and to the required quality and requirement, and to the satisfaction of participants.[ (Chartered Institute of Building , 2002), (Fewings, 2005), (Carmichael, 2004)]

## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

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According to (PMI), 2004 Managing a project typically includes, but is not limited to:

- Identifying requirements;
- Addressing the various needs, concerns, and expectations of the stakeholders in planning and executing the project;
- Setting up, maintaining, and carrying out communications among stakeholders that are active, effective, and collaborative in nature;
- Managing stakeholders towards meeting project requirements and creating project deliverables;
- Balancing the competing project constraints, which include, but are not limited to:
  - Scope,
  - Quality,
  - Schedule,
  - Budget,
  - Resources, and
  - Risks.

The specific project characteristics and circumstances can influence the constraints on which the project management team needs to focus.

Using project management generally helps: to clarify goals and identify problem areas and risk; to isolate activities and easily monitor outcomes. (PMI, 2004). Further, using PM enhances accountability as works can be isolated and responsibilities can be assigned; moreover, it helps focus attention on few specific and important tasks.



### **2.3 Construction Project Management**

According to F. Lawrence Bennett, The management of construction is an enterprise that involves many people with diverse interests, talents and backgrounds. The owner, the design professional and the contractor comprise the primary triad of parties, but others, such as subcontractors, material suppliers, and bankers, insurance and bonding companies, attorneys and public agency officials, are vital elements of the project team whose interrelated roles must be coordinated to assure a successful project. Throughout the project life cycle, from the time the owner first contemplates launching a construction project to that celebrated time, many months or years later, when the completed project is ready for use, the tasks carried out by the various parties vary in type and intensity.

The management of construction project has some differences from the management of other projects. The differences mainly stems from the nature and characteristics of construction projects. The consideration of these differences is important for successful management of construction projects. (Abadir, 2011)

Generally construction projects:

- ❖ Are usually capital intensive, complex; and require significant management skills, involvement and coordination of a wide range of experts in various field. (Chartered Institute of Building, 2002).
- ❖ Are usually undertaken outside; hence, they are susceptible to many variables such as weather and traffic (Gould & Joyce, 2003).
- ❖ Must address the geography and conditions of the project site and the relation of the project to the environment. (PMI), 2007).
- ❖ Are subject to a variety of laws and regulations that aim to ensure public safety and minimize environmental impacts. (Bennett, 2003).

## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

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- ❖ Compared to most other industries, construction projects involve relatively intensive labor use, and consume large amount of materials and physical tools. (Jekale, 2004).

According to (Chartered Institute of Building, 2002), the major task of project management in construction is primarily to coordinate professionals in the project team to enable them to make their best possible contribution to the project efficiently. In addition to knowledge of project management and general Management, managing construction projects requires an understanding of the design and construction process (Hendrickson, 2010). The ability to communicate and the ability to manage team are also very important for successful management of construction projects (Chen, Partington, & Qiang, 2009).

### **2.4 Project Stakeholders**

A stakeholder is an individual, group, or organization who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project. Stakeholders may be actively involved in the project or have interests that may be positively or negatively affected by the performance or completion of the project. Different stakeholders may have competing expectations that might create conflicts within the project. Stakeholders may also exert influence over the project, its deliverables, and the project team in order to achieve a set of outcomes that satisfy strategic business objectives or other needs. (PMI, 2008).

According to (PMI, 2008) Project stakeholders can be actively involved in the entire process of the project or just in one of the phases of the project lifecycle. Most common key stakeholders involved in a project can be classified as follows: Project manager, Sponsor, Customers or users, Sellers, Business partners, Organizational groups, Functional managers.

Stakeholders include all members of the project team as well as all interested entities that are internal or external to the organization. The project team identifies internal and external, positive and negative, and performing and advising stakeholders in order to determine the project requirements and the expectations of all parties involved. The project manager should manage the influences of these various stakeholders in relation to the project requirements to ensure a successful outcome.

## **2.5 Definition of Project Manager**

The project manager is the person assigned by the performing organization to lead the team that is responsible for achieving the project objectives (PMI, 2008).

The Project Manager is a special type of professional with very special skills and training (Convey, 2004). In the construction industry, project managers manage, coordinate, and supervise the construction process from the conceptual development stage through final construction on a timely and economical basis. They are responsible for coordinating and managing people, materials, equipment, budgets, schedules, contracts, and safety of employees and the general public (Bureau of Labour Statistics, 2005). In order to manage project teams successfully, the project managers should manage themselves, be good role models, select the right people with appropriate skills and experience, and know how to manage the people issues.

## **2.6 Role of Project Manager**

Role is the label describing the portion of a project for which a person is accountable.

Frame and Bass (2002) explained that traditional project management takes a narrow view of what the project managers' role is. They look at project managers primarily as implementers. They argued that based on the traditional project management approach, someone makes decisions about which projects should be supported and when the nature of the work has been scoped out it is then handed over to the project manager to execute the work. Accordingly, this perspective does not have a sufficient capability to deal with uncertainty, chaos, and ever-ending changes that are an aspect of today's business environment (Hamilton, 2001).

These findings create the basic explanation which differentiates classic project management from emerging views and the role of project managers accordingly. Classical project management involves getting work done on time, on budget, and within scope. Emerging view on project management searches for a future-oriented and proactive way of planning, controlling and forecasting.

### **2.6.1 The Role of Project Managers in Classic Project Management**

The first article considering project manager functions and characteristics in classic project management was published by Gaddis (1959). He asserted that project managers are professional specialists in diverse fields. He claimed that the brainpower of professional specialists is the primary tool for project managers to create a product, and project managers use this tool for each phase of the project. He introduced an important question that “what kind of man must a project manager be?” and his answer was that the project manager is “the man in between management and the technologist”.

According to Gaddis (1959) a project manager is a man of action, thought, and he is the front man whose major responsibility within the project is to provide and preserve with a sense of momentum. From the classic project management perspective, the main responsibilities of a project manager are planning, organizing, coordinating, and controlling the project.

According to Anderson (1992), for the effectiveness of project management, a project should be managed by a Project manager who has high quality managerial attributes for planning, organizing, coordinating, and controlling. Frame and Bass (2002) believe that classic project management considers the project manager as an implementer who should concentrate on organizing and controlling. Consequently, this perspective does not prepare project managers to deal with uncertainty associate with managing projects.

### **2.2.6.2 Emerging Views in the Role of Project Managers**

Emerging views on project management emphasize that with the rapid growth of change in today’s business, every project must be able to anticipate and respond quickly to changing conditions. Projects need project managers who are skilled and are able to inspire people. Projects require leaders, who can lead project members in the right direction. According to Dobson (2003) “the perfect project manager has strong competence in technical matters as well

## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

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as a commitment to personal self-development. Technical competence involves both those areas relevant to the subject matter of the project as well as project management in general”.

Lientz& Rea (2002) asserted that in modern project management, project managers have access to more information and as a result they have more power over the project. They claimed that project managers must have a high level of skills, knowledge, and abilities along with taking advantage of new technology to support the project. We should not expect to keep project management itself locked in the past.

Leading projects in today’s uncertain and challenging environment requires a special capability that a great manager should have. As Berg and Karlsen (2007) explained “The project manager is under pressure to complete complex and uncertain tasks in the shortest time without sacrificing cost and quality criteria or leaving customers and users dissatisfied”. Project managers need to deal with issues and roles that traditionally were not part of their job. For instance Russell, Jaselski, and Lawrence (1997) emphasized that project managers have to provide their traditional role plus non-engineering competencies to meet today's professional demands.

Emerging view in project management looks project managers as leaders who are frequently required to lead their project members in uncertain situations. Shared leadership, social competence, communication, skills in organizational politics, and the importance of visions, values, and beliefs are important factors that recent research has explored as required competencies for successful project managers in complex environments (Thomas & Mengel, 2008).

According to the literature on emerging view in project management, project managers need to adapt their management style to the immediate project and specific situation and take their managerial skills and characters and align them with the project team to handle the problems and challenges for the completion of the project (Söderlund, 2011). Thomas and Mengel (2008) emphasized that project managers need to be ready for diagnosing situations, adopting appropriate techniques, adapting necessary tools, and learning continuously. They have to know when and how to implement their skills and certain characters effectively to achieve project

expectations. In this emerging view in project management, dealing with people and leading them are the most important factors that a project manager must perform because of his high responsibility in the project (Lewis, 2007). Therefore, in emerging view the role of project managers demand the alignment of management knowledge with skills beyond the technical aspects of the classic engineering area (Edum-Fotwe&McCaffer, 2000).

### **2.7 Responsibility of Project Manager**

In management sense, responsibility is thought of as an internal feeling of duty to use the rights given by the organization. Project managers have the responsibility to satisfy the needs: task needs, team needs, and individual needs. “An important part of a project manager’s responsibility is to manage stakeholder expectations” (PMI, 2008).

The project manager has overall responsibility for planning, organizing, integrating, controlling, leading, decision-making, communicating, and building a supportive climate for the project. (Larry Richman, 2002).

#### **Critical Responsibilities of Project Manager in Construction:**

1. Deliver completed projects within time and budget constraints
2. Develop budget schedules with the Contract Administrator and monitor during the construction process
3. Ensure Final deliverable meeting the quality expectations of the stakeholder
4. High level of leadership and communication skills
5. Ability to manage client issues
6. Ability to manage local government approvals process
7. Ability to manage design process
8. Ability to manage construction process
9. Ability to manage risks

## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

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A project manager is responsible for accomplishing the project; however, the manager might assign all or part of that responsibility to other people on the team. It is important to remember, though, that even when the manager has passed along all or part of the responsibility for completing tasks associated with the project, the project manager still retains full responsibility for the final result. The project manager must be sure the assigned responsibility is clearly stated and the expected results are mutually understood and accepted by all parties.

### **2.8 Authority of Project Manager**

Authority is the power given to a person to complete the assigned responsibility. It includes the appropriate access to resources to complete the job, such as access to personnel or signature authority for the expenditure of funds. Authority must be commensurate with the responsibility assigned and appropriate to the accountability.

Project managers must maintain good balance in assigning responsibility, delegating authority, and holding people accountable. The authority must be appropriate for the responsibility and the accountability must be commensurate with the authority and the responsibility. Successful organizations have written policies and procedures that define how responsibility, accountability, and authority work in the project management environment. It is important to define in writing the specific responsibilities and authority the project manager will have in terms of personnel, equipment, materials, and funds.

## **2.9 OVERVIEW OF PROJECT MANAGER SKILLS.**

Skill it is the ability to do something well or an ability and capacity acquired through deliberate, systematic, and sustained effort to smoothly and adaptively carryout complex activities or job functions involving ideas (cognitive skills), things (technical skills), and/or people (interpersonal skills).

According to Katz Ri to effectively manage and to fulfil the responsibilities, a Project Managers must acquire a balance of Technical (Hard), Interpersonal (soft), and Conceptual skills that help them analyse situations and interact appropriately with a stakeholders.

### **2.9.1 Technical or Hard Skills**

**Hard or Technical skills** are the technical aspects of the project manager's role and include development of tangible deliverables such as project schedules, budgets and work breakdown structures.

Below are some of the required hard skills in project management:

#### **1. Contract Management and Procurement**

The Project manager should be knowledgeable about activities required to ensure fulfilment of the contract and the relevant laws. They should also be familiar with the process of converting business or project needs into outsourced goods and services, and how to select the best vendors. They should know how to manage stakeholders in the supply chain.



## **2. Risk Management**

Project Management Institute (PMI) defines project risk as 'an uncertain event or condition that, if it occurs, has a positive or negative effect on a project's objectives'. Risk Management involves risk identification, risk analysis and risk prioritization and control. It seeks to monitor and manage risks to minimize or avoid their negative effects on the achievement of project objectives.

## **3. Monitoring and Evaluation and Project Performance Metrics**

M&E is the continuous assessment of project implementation in relation to agreed schedules with a view to improve current and future management of outputs, outcomes and impact. It provides managers and other stakeholders with continuous feedback on implementation and identifies actual or potential successes and problems as early as possible to facilitate timely adjustments to project operation. Evaluations are often retrospective and are best done by an independent person or body.

A metric is a standard of measurement by which the efficiency, progress, performance, productivity or quality of a project or product can be assessed. Project management metrics help in assessing the status of ongoing project in terms of schedule, cost and profitability. The metrics also help foresee any potential risks and nail down problems much before they become severe. They also help monitor the profitability of a project, its team productivity and quality of work outputs.

### **4. Budgeting and Scheduling**

A budget indicates how funds will be utilized and expended during the lifetime of a project. Within a budget, all the efforts used in producing the deliverable of each task in the project are be defined in terms of cost and the schedule shows the sequence of the activities.

Once approved, the project manager has to monitor the budget and the schedule milestones and ensure adherence to it. The budget and schedule are among the project control tools.

### **5. Planning**

A project plan is a formal, approved document used to guide both project execution and project control. According to (PMI, 2008), a project plan documents the planning assumptions and decisions, facilitates communication among stakeholders, and document approved scope, cost, and schedule baselines.

A Project plan should answer four basic questions about the project: what work is being done? Why is it being done? Who is doing it? When will it be done?

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### **2.9.2 Interpersonal or Soft Skills**

**Soft skills** refer to interpersonal skills and include traits such as leadership, communication, and negotiation and expectations management. They are largely intangible, difficult to measure and are not associated with a measurable deliverable or a concrete output. Soft skills are generally employed without the use of tools or templates.

## ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS

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According to (PMI, 2013), below are some of the required Soft skills in project management:

- Leadership
- Team building
- Motivation
- Communication
- Influencing
- Decision making
- Political and cultural awareness
- Negotiation
- Trust building
- Conflict management and
- Coaching



Figure, 1 Soft or Interpersonal Skill

# **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

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## **1. Leadership**

Leadership involves focusing the efforts of a group of people toward a common goal and enabling them to work as a team. In general terms, leadership is the ability to get things done through others. Respect and trust, rather than fear and submission, are the key elements of effective leadership. (PMI, 2013)

## **2. Team Building**

Team building is the process of helping a group of individuals, bound by a common purpose, to work with each other, the leader, external stakeholders, and the organization. The result of good leadership and good team building is teamwork. (PMI, 2013)

## **3. Motivation**

Project teams are comprised of team members with diverse backgrounds, expectations, and individual objectives. The overall success of the project depends upon the project team's commitment, which is directly related to their level of motivation.

Motivating in a project environment involves creating an environment to meet project objectives while providing maximum satisfaction related to what people value most. These values may include job satisfaction, challenging work, a sense of accomplishment, achievement and growth, sufficient financial compensation, and other rewards and recognition the individual considers necessary and important. (PMI, 2013)

## **4. Communication**

Communication has been identified as one of the single biggest reasons for project success or failure. Effective communication within the project team and between the project manager, team members, and all external stakeholders is essential. Openness in communication is a gateway to teamwork and high performance. It improves relationships among project team members and creates mutual trust.

## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

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To communicate effectively, the project manager should be aware of the communication styles of other parties, cultural nuances/norms, relationships, personalities, and the overall context of the situation. Awareness of these factors leads to mutual understanding and thus to effective communication. Project managers should identify various communication channels, understand what information they need to provide, what information they need to receive, and which interpersonal skills will help them communicate effectively with various project stakeholders. (PMI, 2013)

### **5. Influencing**

Influencing is a strategy of sharing power and relying on interpersonal skills to get others to cooperate towards common goals. (PMI, 2013)

Using the following guidelines can influence team members:

- Lead by example, and follow through with commitments.
- Clarify how a decision will be made.
- Use a flexible interpersonal style and adjust the style to the audience.

Apply your power skilfully and cautiously. Think of long-term collaboration.

### **6. Decision Making**

There are four basic decision styles normally used by project managers: command, consultation, consensus, and coin flip (random). There are four major factors that affect the decision style: time constraints, trust, quality, and acceptance. Project managers may make decisions individually, or they may involve the project team in the decision-making process. (PMI, 2013)

### **7. Political and Cultural Awareness**

Organizational politics are inevitable in project environments due to the diversity in norms, backgrounds, and expectations of the people involved with a project. The skilful use of politics and power helps the project manager to be successful. Conversely, ignoring or avoiding project politics and inappropriate use of power can lead to difficulty in managing projects. (PMI, 2013)

### **8. Negotiation**

Negotiation is a strategy of conferring with parties of shared or opposed interests with a view toward compromise or reaching an agreement. Negotiation is an integral part of project management and done well, increases the probability of project success. (PMI, 2013)

### **9. Trust Building**

The ability to build trust across the project team and other key stakeholders is a critical component in effective team leadership. Trust is associated with cooperation, information sharing, and effective problem resolution. Without trust it is difficult to establish the positive relationships necessary between the various stakeholders engaged in the project. When trust is compromised, relationships deteriorate, people disengage, and collaboration becomes more difficult, if not impossible. (PMI, 2013)

Some actions project managers can take to help build trust:

- Engage in open and direct communications to resolve problems.
- Keep all stakeholders informed, especially when fulfilling commitments is at risk.
- Spend time directly engaged with the team asking no assumptive questions to gain a better understanding of the situations affecting the team.
- Be direct and explicit about what you need or expect.
- Do not withhold information out of a fear of being wrong but be willing to share information even if you may be wrong.
- Be receptive to innovation and address any issues or concerns in a forthright manner.
- Look beyond your own interests.
- Demonstrate a true concern for others and avoid engaging in pursuits that could be viewed as being detrimental to the interest of others.

### **10. Conflict Management**

Conflict is inevitable in a project environment. Incongruent requirements, competition for resources, breakdowns in communications, and many other factors could become sources of conflict. Within a project's environment, conflict may yield dysfunctional outcomes. However, if actively managed, conflicts can actually help the team arrive at a better solution. The project manager must be able to identify the causes for conflict and then actively manage the conflict thus minimizing potential negative impacts. The project team is then able to deliver better solutions and increase the probability of project success.

Managing conflict is one of the biggest challenges a project manager faces. It draws upon all of the other interpersonal skills of a project manager in order to lead the team to a successful resolution of the situation in conflict. (PMI, 2013)

### **11. Coaching**

Coaching is a means of developing the project team to higher levels of competency and performance. Coaching is about helping people recognize their potential through empowerment and development. Coaching is used to aid team members in developing or enhancing their skills or to build new skills required to enable project success. Coaching can take many forms and approaches. In some instances, formal or informal training may be developed to increase technical skills or assist team-building efforts and facilitate consistent interpersonal interactions.

Coaching is also used to address poor performance and to help team members overcome deficiencies in their skill sets. Coaching can be a powerful motivator for teams. As teams develop their skills, abilities, and confidence, their willingness to take on challenging or demanding tasks is increased. This can lead to more effective and productive teams. (PMI, 2013)

### **2.9.3 Conceptual and organizational skill:**

Is the ability of a project manager to envision the project as a whole. It includes recognizing how the various functions of a project depend on one another, and how changes in any single part could affect all the other parts.

Conceptual skills are the ability to coordinate and integrate all the projects efforts, it requires for the project manager to see the project as a whole and not just the sum of its parts, ability to understand how all the parts make a whole and how they all relate and depend on one another, and the ability to anticipate how a change in one part of the project will affect the entire project. The bigger and more complex is the project, the larger is the need for this type of skill. This skill helps the project manager keep a clear vision of the ultimate goal of the project and understand its relationships and dependencies with the project's environment.

Conceptual skills refer to the ability to see the "big picture." Project managers with good conceptual skills are well aware of how various elements of the project environment or ecosystem interrelate and influence one another. They understand relationships between projects, the development organization, the donor organization, the beneficiaries and its environment, and how changes in one part of the environment affect the project. Conceptual skills are necessary to appropriately deal with project politics and to acquire adequate support from top management.



## **CHAPTER THREE**

### **3. PROJECT METHODOGY**

It is apparent that for any research, identifying clear and efficient methodology is a crucial for the implementation of the objectives and effectiveness of the study as a whole to provide the best quality of research result.

The main purpose of this project were to assess what are the roles and skill of a project managers whether and to what extent the roles and the skill are being applied by Ethiopian project managers in managing their construction projects. Such investigation requires a range of methodology to enable arrive to some reasonable finding and conclusions.

#### **3.1. Data collection**

For the effectiveness of the study as a whole and to provide the best quality of project result detailed data collection is critical. Hence, the necessary data will be collected as follows

##### **3.1.1 Research Population and Sample**

Only Road Project managers will be included in this research.

##### **3.1.2 Sources of data**

The basic data to be collected includes the following which will be collected from primary and secondary sources.

- Project managers in road projects
- Previously done research's
- Construction companies owners,
- Addis Ababa Road Authority managers and Supervisors

## ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS

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- Regulatory bodies and other related sources found necessary

The primary data inputs will be collected from

- ✚ Paper survey
- ✚ interviews
- ✚ questioners

### 3.2 Data Analysis

- Qualitative analysis.
- Finally, based on the results obtained, conclusions and recommendations will be forwarded.

## **CHAPTER FOUR**

### **4. PROJECT ANALYSIS AND DISCUSSION**

#### **4.1 Project Analysis**

The purpose of this chapter is to present the finding of the project. It focuses on the project interviews and questioners to explore the current capability and perceptions of project managers and high level executives in different road construction projects regarding the roles and skills of project manager for the success of project.

#### **Interview**

It is clear that interview is one of the primary data collection methods which are flexible and adaptive way of investigating underlying motives of a subject. The interview undertaken for this project was based on semi structured style. This type of interview has a predetermined set of questions (generalized form of questionnaire) with a flexible order depending on what the interviewer perceives the subject matter by looking at the respondent capability and exposure or experience. The participants for the interviews were 1 female and 8 male. Their experience ranged from 7 to 20 years of which 6 worked as a project manager in different construction projects and two senior executives of construction companies and one construction company owner.

#### **Questioners**

Closed-ended questionnaire on the assessing the skill of project manager were used in this paper to support or supplement responses found by interview. Questioners where prepare to assess the different skills project manager, it will support or supplement responses and arguments found by interview. These questioners are given to 6 different project managers. All of the respondents were university graduates. Their experiences ranged from 5 to 15 years.

### **4.2 Discussions**

The results of this study showed that developing skilled project managers is not a simple process. It is a complex process of developing different sets of skills. The data also revealed that these competencies are situated in the context, and are dynamic rather than static. So there is a need for continuous development and upgrading of skills. In this section, the key categories found from the interview are summarized below.

Almost all participants confirmed that technical knowledge and competence were the primary sources of their reliability in the system.

“Success is not accidental in our job. It is the result of a series of related and deliberate acts like planning, cost control, scheduling, and risk management. If one doesn’t know how to perform these tasks, it is better to stay away from managing a project.” (SE)

“The project manager is expected to integrate all aspects of the project: planning, managing schedules, forecasting budgets, managing risks, and so on.” (PM)

“The project manager should control and verify scope time, cost and quality management.” (PM)

“A project manager should have to better understanding and necessary knowledge about the work that has been done by his team meet, so that he will be a better leader or mentor. (PM)

“The critical factor to turn a good manger to a great one is by taking updated trainings, participate in project management related workshops and need also to learn new technology’s or software’s that ease up his works.” (CO).

## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

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Interviewees indicated concerns about leadership and management skills for managing projects. They observed that leadership and management capabilities are essential for effective project management. Some of the interviewers also mentioned the key for project managers are the ability to communicate with others and ability of handling customers. About two-third of the interviewees talked about skill deficiencies in the area of communication.

“People skills are the most important role of a project manager if you don’t read someone very quickly and communicate effectively, then that person is really uncomfortable and he won’t really succeed. It took a long time for me to learn some of these people skills and I know that I’ve made a lot of mistakes.” (SE)

They explained that many new project managers were not familiar enough with the application of variety leadership abilities, such as communicating effectively, inspiring and motivating project groups. However, they explained that putting emphasis on leadership training does not mean everybody is going to be a great leader as a result. They discussed the role of individual such as personality and abilities have a great impact. (SE)

Most the respondent agreed on one thing to gain good project manager characteristics one should take a lot of training and learn from day to day experience and has to be ready for change.

“Project manager gain their people skill through experiences and it is hard to change the characters of a project manager by giving them courses sometimes it will be the inborn nature of that person.” (PM)

“In Ethiopian construction project manager certification or certified project managers are small in number or not that known. They only have some job descriptions and responsibility which will be given by the company when they are hired. ” (PM)

When they were asked further about leadership skill, they explained some necessary management skills including problem solving; influencing people, public speaking, effectively organizing and running a meeting, motivating employees, evaluating their performance,

## ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS

Persistent, monitoring skills and on site problem solving skill and Presentation and communication skills. There was a general sense among the respondents that education programs do not provide enough training in these skills. They explained that they have learned some of these skills with a lot of trial and errors.

### Abbreviations

- **PM: Project Manager**
- **SE: Senior Executive**
- **CO: Company Owner**

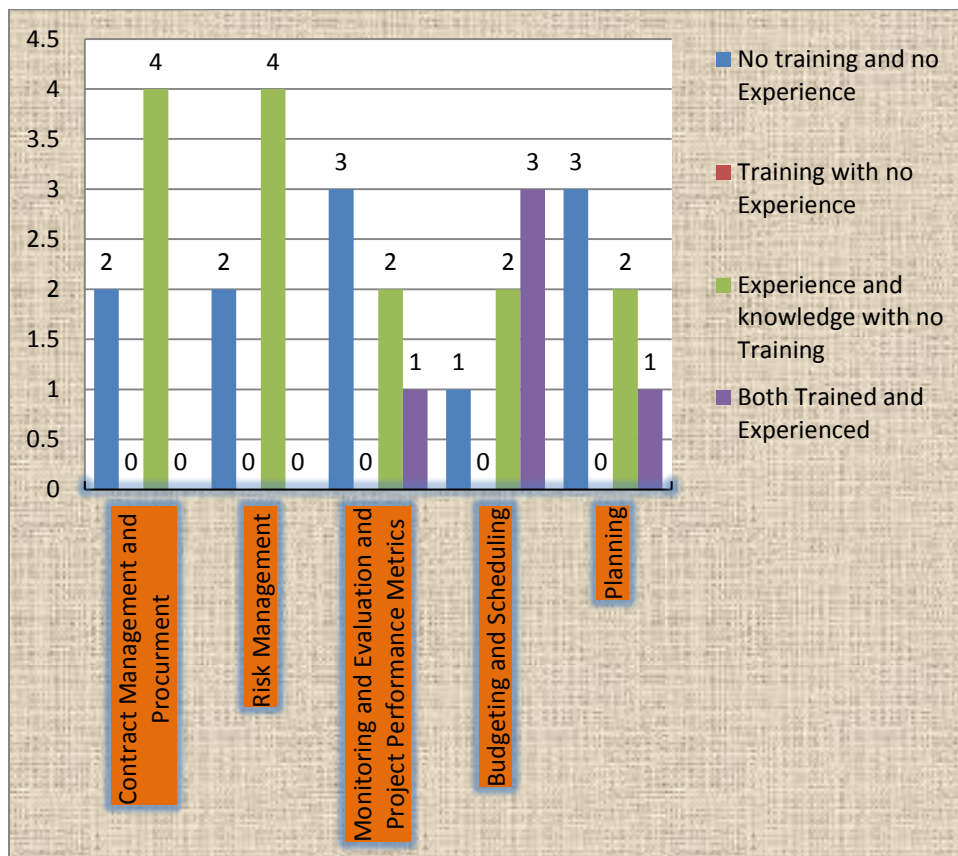
The following table represents the summary of technical or hard skills and their perception by project managers. This questioner only answered by six project managers working in different construction areas.

Table 1, Summary of Technical or Hard Skills

No	Description	Capability			
Technical or Hard Skill		No training and no Experience	Training with no Experience	Experience and knowledge with no Training	Both Trained and Experienced
1	Contract Management and Procurement	2	0	4	0
2	Risk Management	2	0	4	0
3	Monitoring and Evaluation and Project Performance Metrics	3	0	2	1
4	Budgeting and Scheduling	1	0	2	3
5	Planning	3	0	2	1

## ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS

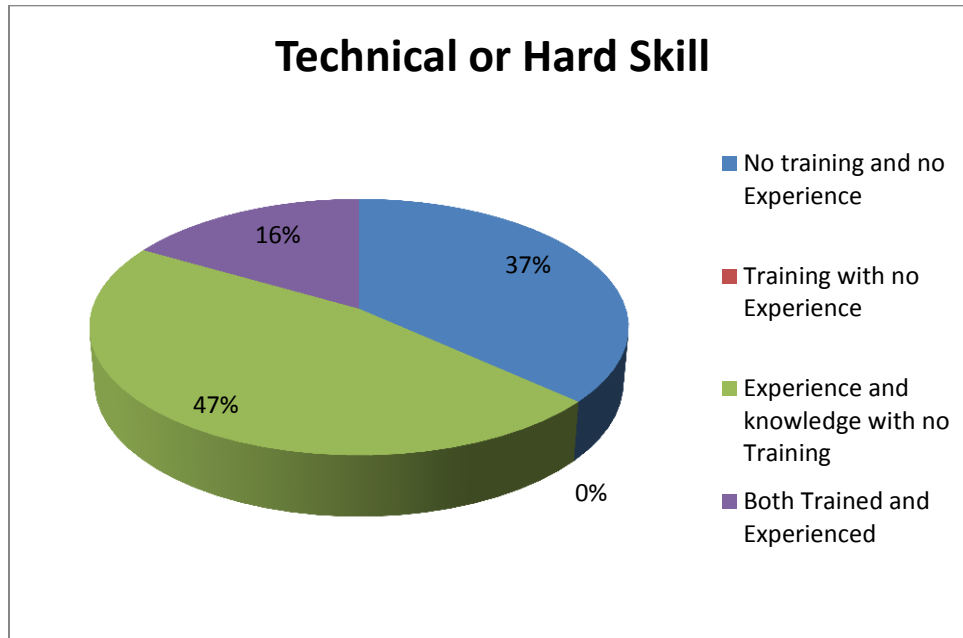
According to the data in Table 1, the skills of project managers regarding basic knowledge in their own field are definitely important. From the respondents they achieved this technical skill with No training and no Experience (37%), Training with no Experience (0%), Experience and knowledge with no Training (47%), Both Trained and Experienced (17%).



Graph 1, Technical or Hard skill versus Capability

## ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS

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Graph 2, Technical or Hard skill versus Capability



## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

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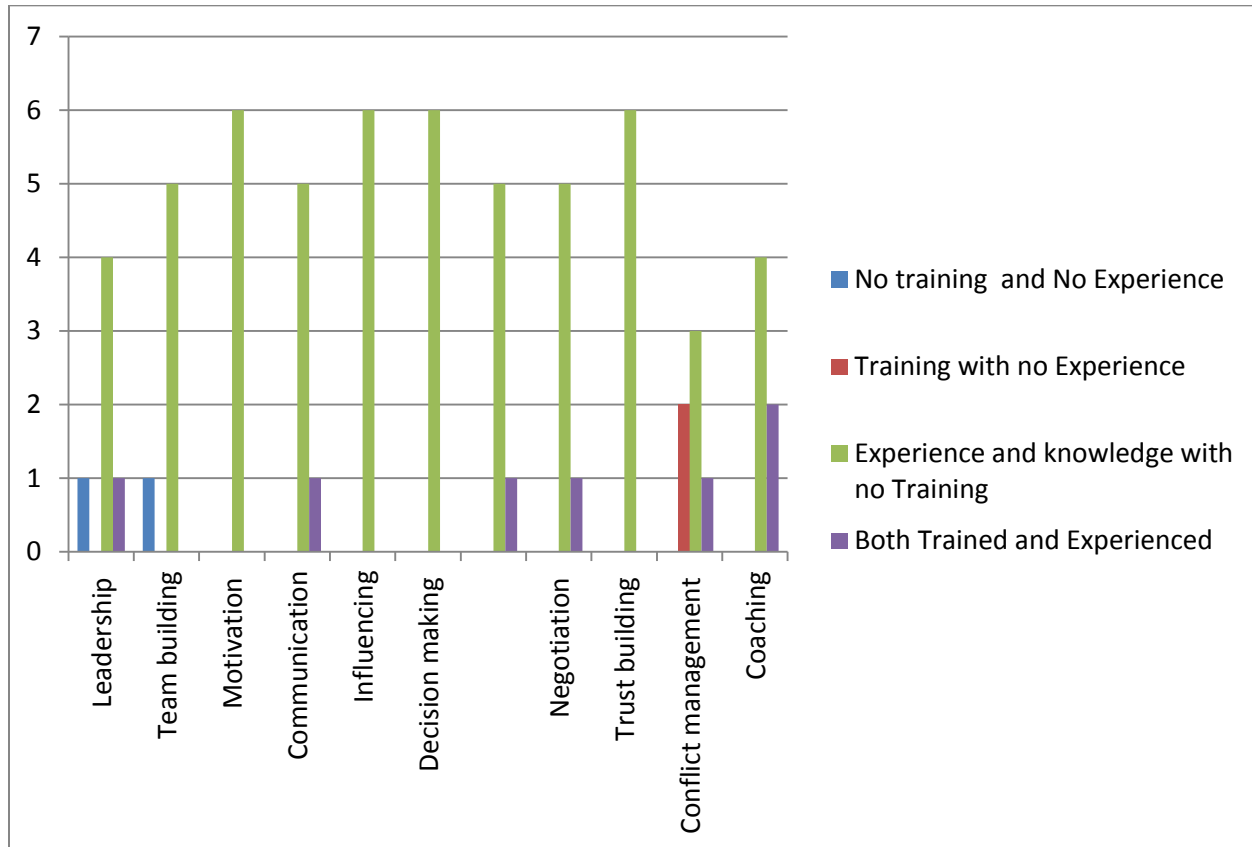
The following table represents the summary of interpersonal or soft skills and their perception by project managers. This questioner only answered by six project managers working in different construction areas.

Table 2, Summary of Interpersonal or Soft Skills

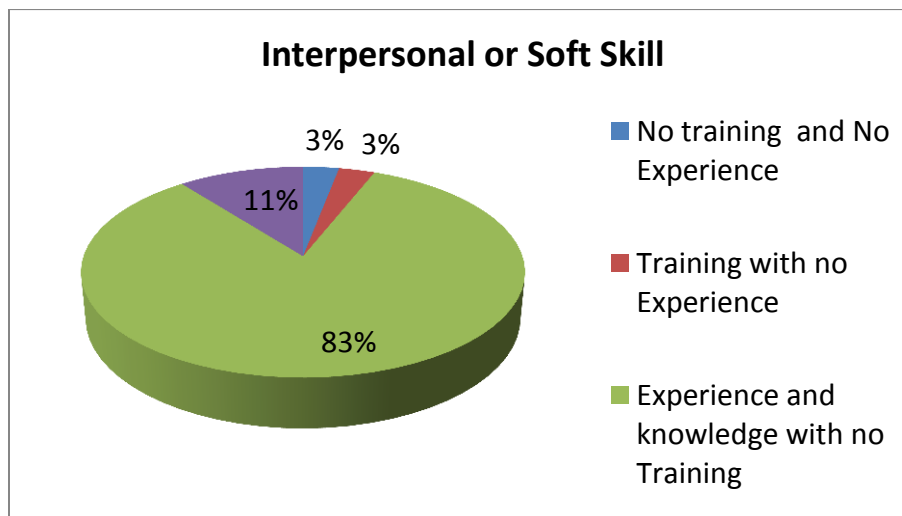
No	Description	Capability			
		No training and No Experience	Training with no Experience	Experience and knowledge with no Training	Both Trained and Experienced
1	Leadership	1	0	4	1
2	Team building	1	0	5	0
3	Motivation	0	0	6	0
4	Communication	0	0	5	1
5	Influencing	0	0	6	0
6	Decision making	0	0	6	0
7	Political and Cultural Awareness	0	0	5	1
8	Negotiation	0	0	5	1
9	Trust building	0	0	6	0
10	Conflict management	0	2	3	1
11	Coaching	0	0	4	2

According to the data in Table 2, the respondents achieved their interpersonal or soft skill without No training and no Experience (3%), Training with no Experience (3%), Experience and knowledge with no Training (83%), Both Trained and Experienced (11%).

## ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS



Graph 3, Interpersonal or Soft skill versus Capability



Graph 4, Interpersonal or Soft skill versus Capability

## **CHAPTER FIVE**

### **5. CONCLUSION AND RECOMMENDATION**

The aim of the project is to enlighten and identify the roles and skill of project managers needed for an ideal project manager and also to implement it in federal road projects. The following conclusions and recommendations are

#### **5.1 Conclusion**

- ✓ Most of the project managers learn their soft skill by trial and error on the expense of the project performance.
- ✓ The senior executives and company owner are dissatisfied by the project manager's capability.
- ✓ Most of the project managers have their technical skills and practice it with the combination of knowledge and experience. Also they have taken software trainings like Ms-project, primavera, Auto-cad and others.
- ✓ Most of the project managers have soft skills and practice with the combination of knowledge and experience without trainings.

This project had shown that the role of a good and educated project manager who possess the skills and is able to apply the right tools and techniques of project management, will beyond doubt influence the project objectives.

### **5.2 Recommendations**

- Education and training should be given for improvement the technical and soft skills for project manager's .Continuous skills development for project managers by giving different workshops and trainings.
- Project managers must have a good balance of different skill rather than maximize only one.
- Encouraging project managers to be certified. Institutes must give certification for project managers so that this will make them competitive on construction industry.
- Company owner and senior executive should have the knowledge and identify the desire skill needed to hiring a project manager. We can achieve this by giving simple training for company owners and senior executives.
- Companies shall prepare capacity building programs to improve technical & interpersonal skill of project manager.
- Programs of training in project management for the project managers and trainees must be adjusted according to the needs and requirements for certain knowledge, skills and competencies and context of the project.

Finally, I recommend further study on the area to be conducted by interested researchers.

### **6. REFERENCES**

- Abadir.H.Yimam (2011), Project Management Maturity in the Construction Industry of Developing Countries, Master's Thesis, University of Maryland
- Abu Hassan Abu Bakar,(2011) "The role of project managers in improving project performance in construction: An Indonesian experience", International Journal of Academic Research "
- Adams, O. (1997). Contractor development in Nigeria: Perceptions of contractors and professionals. *Journal of Construction Management and Economics*, 15(1), 95-108.
- A. H. Abu Bakar. The Construction in Developing Countries in the Nineties: Some Issues on Indigenous Construction Companies.J. of HBP. 9: 21-44 (2002).
- Andersen. (1992). Project quality and project managers. *International Journal of Project Management*, 10(3).
- Andersen, S. W. (2008). Can project management support poverty reduction in Africa. *PMI Global Congress 2008 Proceedings*. (R. Akiri, Ed.) Project Management Institute (PMI).
- Bennett, F. L. (2003). *The management of construction : A project life cycle approach*. Burlington, MA: Butterworth- Heinemann.
- Berg, M. E., & Karlsen, J. T. (2007). Mental Models in Project Management Coaching. *Engineering Management Journal*, 19(3).
- Burke, R. 2001.*Project management*.3rd edition. Cape Town: ABC Press.
- Carmichael, D. G. (2004). *Project management framework*. Lisse: Swets & Zeitlinger B.V.

## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

---

Chartered Institute of Building . (2002). Code of practice for project management for construction and development (3 rd ed.). Blackwell Publishing.

Chen, P., Partington, D., & Qiang, a. M. (2009, June). Cross-cultural understanding of construction project managers' conceptions of their work. *Journal of Construction Engineering and Management*, 135(6), 477-487.

Cleland, D. I., & Ireland, L. R. (2002). Project management strategic design and implementation (4th ed.). The McGraw-Hill Companies.

Dobson, M. S. (2003). *Streetwise Project Management: How to Manage People, Processes, and Time to Achieve the Results You Need*: Adams Media.

Edum-Fotwe, F. T., & McCaffer, R. (2000). Developing project management competency: perspectives from the construction industry. *International Journal of Project Management*, 18(2), 111-124.

Fewings, P. (2005). *Construction project management: An integrated approach* (Third ed.). New York, NY: Taylor & Francis Group.

Frame, & Bass, J. (2002). *The New Project Management: Tools for an Age of Rapid Change, Complexity, and Other Business Realities* (Second Edition ed.).

F. Lawrence Bennett, *the Management of Construction: A Project Life Cycle Approach* F. Lawrence Bennett, PE, PhD Emeritus Professor of Engineering Management University of Alaska, Fairbanks.

F. C. Gray & W. E. Larson. *Project Management: The Managerial Process*. McGraw Hill. 2003.

## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

---

F. T. Edum-Fotwe and R. McCaffer Developing Project Management Competency: Perspectives from the Construction Industry. International Journal of Project Management. 18: 111-124 (2000).

Gaddis. (1959 ). The project manager. 89-97.

Hamilton, A. (2001). Managing projects for success: a trilogy: Thomas Telford.

Hendrickson, C. (n.d.). Project Management for Construction. Retrieved 03 17, 2010, from The Project Management Hut web site: <http://www.pmhut.com/project-management-for-construction>

Idoko, L. A. (2008). Developing local capacity for project management - Key to social and business transformation in developing countries. PMI Global Congress 2008. Project Management Institute.

Jalaladdin Ramazani, 2014. Project Managers and the Journey from Good to Great Rethinking Project Management Training and Education in the Oil and Gas industry, Calgary, alberta

Jekale, W. (2004).Performance for public construction projects in developing countries: Federal road and educational building projects in Ethiopia. Norwegian University of Science & Technology.

J. Thomas and T. Mengel. Preparing Project Managers to Deal With Complexity-Advanced Project Management Education. International Journal of Project Management. 26: 304-315 (2008).

Katz RI. Skills of an effective administer. Harvard Business Review, Business Classics: Fifteen Key Concepts for Managerial Success, 1991.

Kerzner, Harold, Project Management: A Systems Approach to Planning, Scheduling, and Controlling (8th ed.), John Wiley& Sons, Inc. (2003).

## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

---

Kerzner, H. (2001). Strategic planning for project management using a project management maturity model. John Wiley & Sons, Inc.

Kerzner, H. (2006). Project Management, Hoboken: John Wiley & Sons NJ.

Lewis, J. P. (2007). The Project Manager's Desk Reference (Third Edition ed.): McGraw-Hill.

Lientz, B. P., & Rea, K. P. (2002). Project Management for the 21st Century (Third ed.): Academic Press.

Long, N. D., Ogunlana, S., Quang, T., & Lam, K. C. (2004). Large construction projects in developing countries : A case study from Vietnam. International Journal of Project Management, 553-561.

Michelle Burger, 2013. Project management in the built environment: The need for industry specific knowledge.

Martyn J. Hills, Paul W. Fox, Carol K. H. Hon, Patrick S. W. Fong, and Martin Skitmore) The Role of Project Managers in Construction Industry Development ,International's 52nd Annual Meeting & ICEC's 6th World Congress on Cost Engineering, Project Management and Quantity Surveying, pages DEV.14.1-DEV.14.9, Toronto, Ontario, Canada.

Malan, A., Pretorius, L., & Pretorius, J. (2007). A frame work for increasing project maturity and capability in South Africa. Management of Engineering and Technology (pp. 2212 - 2224). Portland ,OR: Portland International Center for Management of Engineering and Technology.

Morris P. W. G., 1997, Chapter1, Introduction, the Management of Projects, Thomas Telford Books, New York.



## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

---

Nellore, Rajesh, and R. Blachandra, “Factors Influencing Success in Integrated Product Development (IPD) Projects,” IEEE Transactions on Engineering Management, 48:2 (May 2001), pp. 164–174.

Project Management Institute (PMI). (2004). A guide to the project management body of knowledge (PMBOK® Guide) (3rd ed.). Newtown Square, PA, USA: Project Management Institute (PMI).

PMI. (2012). Guide to the Project Management Body of Knowledge (PMBOK (R) Guide). Paper presented at the Project Management Institute.

PMBOK. (2013). A Guide to the Project Management Body of Knowledge. (Fifth ed.): Project Management Institute

Russell, J., Jaselski, E., & Lawrence, S. (1997). Continuous assessment of project performance. Journal of Construction Engineering and Management 123(1), 64±71.

S. El-Sabaa, “The skills and career path of an effective project manager” International Journal of Project Management.

Stanleigh, M. (2007, 30 August). Process management vs project management. Retrieved 03 17, 2010, from Improvement and innovation.com: <http://www.improvementandinnovation.com/features/articles/process-management-vs-project-management>

Shenhar, A. J., & Dvir, D. (2007). Reinventing project management: The diamond approach to successful growth and innovation. Boston: Harvard Business School Press.

Söderlund, J. (2011). Pluralism in project management: navigating the crossroads of specialization and fragmentation. International Journal of Management Reviews, 13(2),

153-176.

Thomas, J & Mengel, T. (2008). Preparing project managers to deal with complexity–Advanced project management education. *International Journal of Project Management*, 26(3), 304-315.

Wheatley, M. (n.d.). The importance of project management: New research into the role of project management in a modern developed economy like the UK. Retrieved March 17, 2010, from Project Smart. co.uk: <http://www.projectsmart.co.uk/the-importance-of-project-management.html>

Voropajev, V. I. (1998). Project management development for transitional economies (Russian case study). *International Journal of Project Management*, 16(5), 283-292.

## **APPENDIX:**

### **Sample of the Interview Questions**

1. Position/role in the company?
2. Have you received any Project Management related training?  
If yes what was the highest level of training you received?
3. Have you worked as Project Manager? If yes, for how long?
4. What is the category of your organization GC, RC, BC or others?
5. What is the grade of your organization?
6. Approximately, for how long has your organization been in the construction business?
7. What is the major type of construction you involve through or manage in your working experience?
8. Think of great managers you know, what skills do they demonstrate that explain their success?
9. Which critical factors are necessary for future project managers?
10. Which critical factors turn a good manager to a great one?
11. How can a project manager gain these characteristic(s)?
12. Think of very ineffective managers you know, what skills do they miss that explain their failure?
- 13, if you had to train an engineer to become a project manager what knowledge and what skills would you make certain that person possessed in order to perform successfully as a project manager?
14. How can a project manager gain the competencies required to manage a project successfully?
15. To what extent you can use your authority while you are working as a project manager?
16. What is the most important skill a project manager should have?
17. What knowledge is needed to be a Construction project Manager?

## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

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## **ASSESSING THE ROLES AND SKILLS OF PROJECT MANAGERS IN FEDERAL ROAD PROJECTS**

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